

**Name of the organization**

European Commission DG-JRC, Institute for Energy and Transport

Name of the infrastructure / laboratory

SolTeF – Solid-state hydrogen storage Testing Facility

Address and country of the infrastructure / laboratory

Westerduinweg 3, 1755 LE Petten, The Netherlands

Person responsible of the access / Contact person

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Main field of activity of the infrastructure / laboratory

► Transportation and Refueling Infrastructure

Short description of the infrastructure / laboratory

The SolTeF laboratory is dedicated to measure the hydrogen sorption parameters employing commercially available, state-of-the-art experimental set-ups based on volumetric, gravimetric and spectrometric methods. What makes SolTeF rare is first of all its independency from material development centres, and its focusing on accuracy and repeatability of hydrogen sorption measurements. SolTeF offers analytical services for assessment of hydrogen storage parameters, such as overall capacity, pressure-composition isotherms (PCI), thermal gravimetric analysis (TGA), thermal desorption spectroscopy (TDS) and reaction kinetic curves. Long term cycling behaviour studies are also possible using an in-house developed device.

Main research area(s) of the infrastructure / laboratory

Testing the hydrogen sorption properties of solid state materials potentially interesting from hydrogen storage point of view

Instruments and tools available for the above mentioned research

Gravimetric and volumetric based gas sorption analyzers covering the operation ranges from LN2 – 500 degC temperature and from 0 – 200 bars pressure; TDS-MS coupled analyzers for measurements from LN2 temp. up to 500 degC and pressure up to 130 bars. Ball mill and glove-boxes for sample preparation and storage.

